

Remarks

Claims 1-20 remain pending in this application after entry of this paper. Independent claims 1, 4, 7, 11, and 16 have been amended to clarify that each chunk includes a well-defined segment of content with trick mode support and any appropriate reconstruction rules to assemble with prior and next chunks at the serving locations. Claims 1, 4, 13, and 18 have been amended to recite serving a digital asset from a serving location to a user. The invention is believed to be patentable.

The invention relates to management and distribution techniques for on-demand digital assets in a content distribution network. Traditionally, digital assets are dealt with mainly at the individual file level until reaching the serving location. According to the invention, a pipelined distribution process is implemented between the central content management system and the plurality of on-demand serving locations for distributing digital asset chunks in a pipelined fashion. The independent claims specify that each chunk includes a well-defined segment of content with trick mode support and any appropriate reconstruction rules to assemble with prior and next chunks at the serving locations. Put another way, the claims recite a specific approach to dealing with digital assets as the digital assets progress from a central location to a serving location. Some of the claims further recite serving a digital asset from a serving location to a user.

Original claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Belknap et al. (U.S. Patent No. 5,586,264) in view of Houtepen et al. (U.S. Pub. No. 2002/0012361). Currently pending claims 1-20 are believed to be patentable.

Claim 1, for example, recites a method of asset management and distribution for use in a content distribution network. The content distribution network includes a central content management system that acquires digital assets for distribution to on-demand serving locations for on-demand delivery to users. Each digital asset includes a package of files. The files are processed prior to distribution from the central management system to provide trick

mode support. The method comprises breaking up the digital asset at the central content management system into chunks for departure.

The method further comprises utilizing a pipelined distribution process between the central content management system and the serving locations for the digital asset chunks. Each chunk includes a well-defined segment of content with trick mode support and any appropriate reconstruction rules to assemble with prior and next chunks at the serving locations. The digital asset chunks arrive at the serving locations and are reassembled to create the digital asset with trick mode support. The method further comprises serving the digital asset from a serving location to a user.

Belknap describes media streaming. Belknap does not relate to asset management and distribution as recited in the claims. Belknap describes serving, or streaming, the media from a communications node.

The claimed invention relates to asset management and distribution. In particular, digital assets are traditionally dealt with mainly at the individual file level until reaching the serving location. According to the invention, a pipelined distribution process is used to deal with digital assets between the central content management system and the serving locations. Belknap is only describing serving, or streaming, of media from a communications node or serving location and does not describe the claimed approach to delivering digital assets from the central content management system to the serving location.

The Examiner acknowledges that Belknap does not teach assembling arriving digital asset chunks to recreate the digital assets with trick mode support. This is because Belknap is not describing a pipelined distribution process between a central content management system and serving locations for digital asset chunks. Belknap is only describing media streaming from the serving location. According to Belknap, data is streamed to the end user from the communications node or serving location. There is no discussion of the claimed

approach to distributing the digital asset from the central content management system to the serving locations.

There is no motivation to reassemble the digital asset in Belknap, as Belknap is describing streaming media, as opposed to the transferring of a digital asset in its entirety. Any such re-assembly would change the principle of operation in Belknap.

The Examiner has relied on Houtepen as a secondary reference to suggest modifying Belknap to achieve the claimed invention. Houtepen only describes an approach to generating a multiplexed MPEG signal. Houtepen does describe combining elementary streams to generate a multiplexed MPEG signal. However, Houtepen does not overcome the shortcomings of Belknap. There is no suggestion of reassembling digital asset chunks to recreate the digital asset with trick mode support as claimed. Houtepen is only describing combining elementary streams to produce a multiplexed MPEG signal.

For reasons given above, claim 1 is believed to be patentable.

Each of the remaining independent claims recites a combination of features including a pipelined distribution process between the central content management system and the serving locations, and further recites each chunk including a well-defined segment of content with trick mode support and any appropriate reconstruction rules to assemble with prior and next chunks at the serving location. Accordingly, all claims are believed to be patentable.

In summary, Belknap does not describe the claimed pipelined distribution process between the central content management system and the serving locations. To the extent that the Examiner directs attention to the video segments in Belknap, Applicant points out that this description in Belknap relates to a streaming media server and there is no reassembly of the digital asset. After all, the claims recite reassembling the digital asset at the serving location after receiving the digital asset chunks. Some claims further recite serving

the digital asset from a serving location to the user. In Belknap, there is no reassembly of the digital asset as Belknap is describing streaming of the digital asset after the digital asset has reached the data storage system at the communications node. To the extent that the Examiner relies on Houtepen as a secondary reference, Applicant points out that Houtepen is only describing the generation of a multiplexed MPEG signal. These elementary streams in Houtepen being multiplexed to create an MPEG signal do not overcome the noted shortcomings. Further, any attempt to make the proposed modification to Belknap goes against the operating principles of Belknap. The goal in Belknap is streaming media, and is not asset distribution.

Claims 1-20 are believed to be in condition for allowance and such action is respectfully requested.

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